HONORS

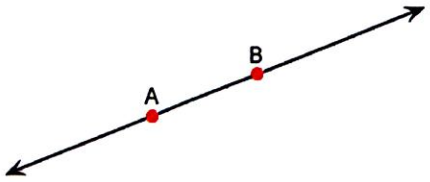
WLPCS
Geometry

Name: ANSWER KEY Date: _____ Per.: _____

Unit 1 Review

Directions: Complete the problem set. Check your answers against the answer key as you work!

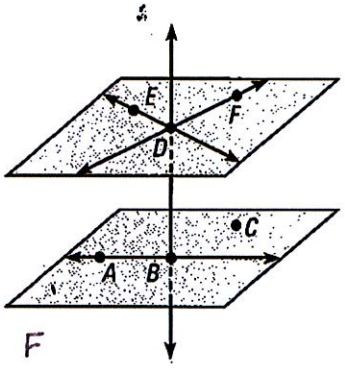
1. Which axiom does the following diagram represent? State the full axiom (not just the number).



Axiom #2 - a line segment can be extended indefinitely to form a line.

2. Illustrate the following axiom: Given any line segment, a circle can be drawn using the segment as the radius with one endpoint as the center.

Decide whether the statement is *true* or *false*.



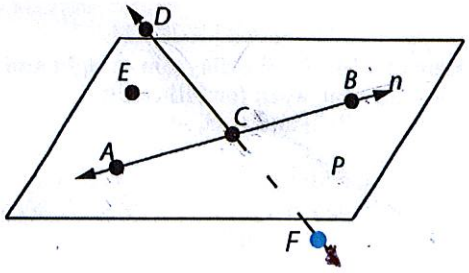
3. Points A, B, and C are collinear. F
4. Points A, B, and C are coplanar. T
5. Point F lies on $\overleftrightarrow{DE}$. F
6. $\overleftrightarrow{DE}$ lies on plane DEF. T
7. $\overleftrightarrow{BD}$ and $\overleftrightarrow{DE}$ intersect. T
8. $\overleftrightarrow{BD}$ is the intersection of plane ABC and plane DEF. F

9-12

9. Where does $\overleftrightarrow{DF}$ intersect Plane P?
Point C

10. Where does $\overleftrightarrow{DF}$ intersect $\overleftrightarrow{AB}$?
Point C

11. Where does $\overleftrightarrow{AB}$ intersect Plane P?
$\overleftrightarrow{AB}$



11. Name Plane P using 3 points:

Plane EAB (among others)

12. Name two non-coplanar points: C, F (among others)

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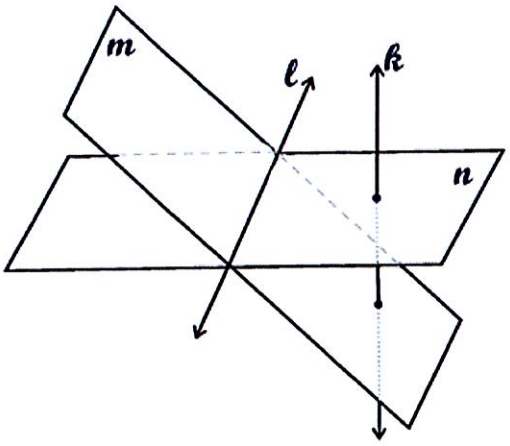
13. Where does Plane *m* intersect Plane *n*?

Line ℓ

14. Describe the intersection of line *k* and Plane *n*.

A point



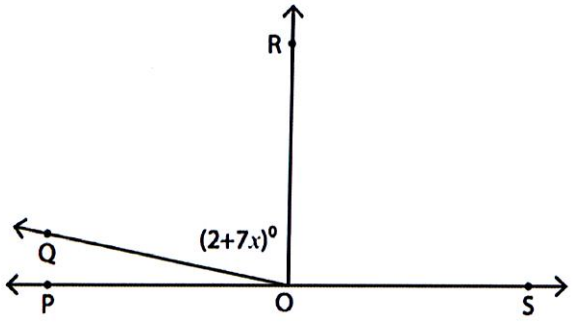
15. Describe the three possible relationships between a plane and a line.

① intersect at a point
② intersect at a line
③ do not intersect

16. Describe the three possible relationships between two planes.

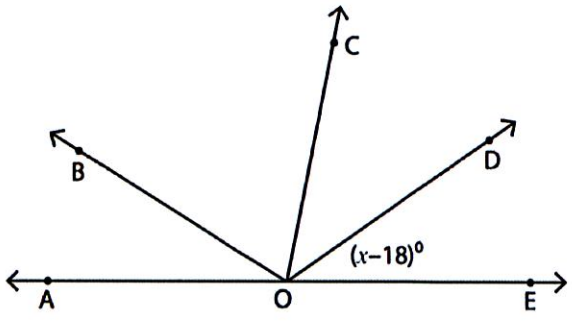
① intersect at a line
② intersect at a plane
③ do not intersect

17.



$\angle POQ = 12^0$ $x =$ 11
$\angle ROS = 89^0$ $\angle QOR =$ 79°

18.



$\angle AOC = 101^0$ $x =$ 53
$\angle COD = 44^0$ $\angle BOE =$ 149°
$\angle BOC = 70^0$

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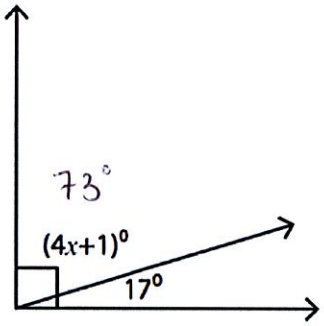
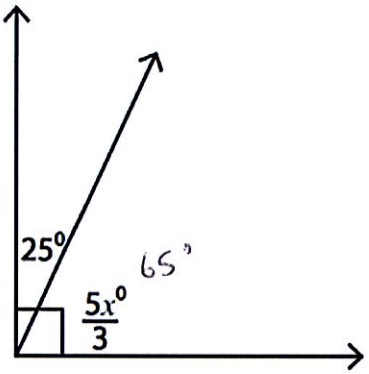
Directions: Find the measure of each unknown angle.

19.



$x = 18$

20.



$x = 39$

21. Using the diagram below:

a. Name an obtuse angle: $\angle DOA$

b. Name a straight angle: $\angle EOA$

c. Name two supplementary angles: $\angle EOD + \angle DOA$

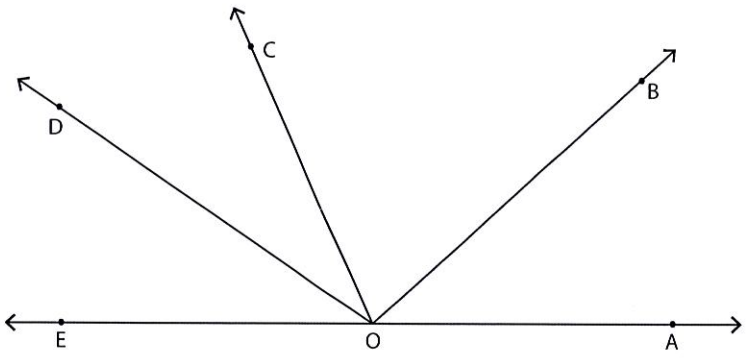
d. Name **three** supplementary angles: $\angle EOD + \angle DOB + \angle BOA$

Many correct answers!

e. If the measure of $\angle EOC$ is 78°, what is the measure of $\angle COA$? 102°

f. Explain how you found your answer to part e.

$\angle EOC$ and $\angle COA$ are supplementary $\rightarrow$ $180° - 78° = 102°$



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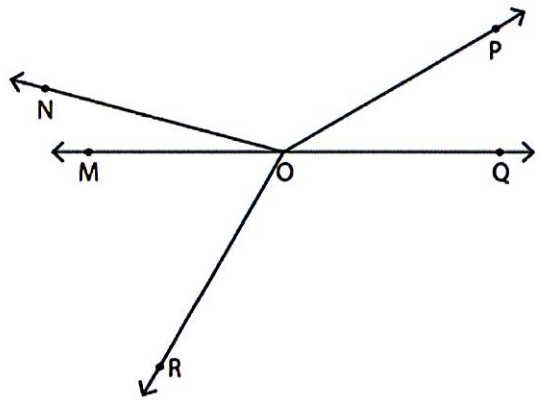
22.

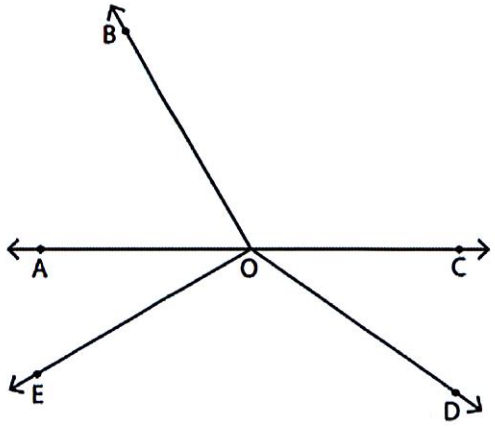


$\angle POQ = 30^0$ $\angle MOP =$ 150°

$\angle ROQ = 120^0$ $\angle ROM =$ 60°

$\angle NOR = 75^0$ $\angle MON =$ 15°

23,



$\angle BOE = 90^0$ $\angle BOC =$ 120°

$\angle AOE = 30^0$ $\angle EOC =$ 150°

$\angle DOE = 115^0$ $\angle AOB =$ 60°

24. An angle is 10 degrees less than 3 times its complement. Find the angle and its complement.

$x = 3(90 - x) - 10$

$x = 270 - 3x - 10$

$x = 260 - 3x$

$4x = 260$

$x = 65$

65°, 25°

25. Directions: For each of the four sets of equations below, determine whether they are parallel, perpendicular, or neither. If they are "neither", change one of the equations to make them parallel or perpendicular.

$3x - 8y = 11$

$3x - 6y = 10$

Neither

$2y + 3x = 5$

$3y + 3x = 5$

Neither

$\frac{1}{3}x + \frac{2}{3}y = \frac{3}{5}$

$2x + 4y = 7$

Parallel

$\frac{1}{2}x + \frac{1}{3}y = 2$

$2x - 3y = 4$

Neither